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(54) **Fan**

(57) To dispense a fragrance, the blades of a fan consist of a material, e.g. moulded polymeric plastic, incorporating an odour emitting substance.

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FIG. 1.

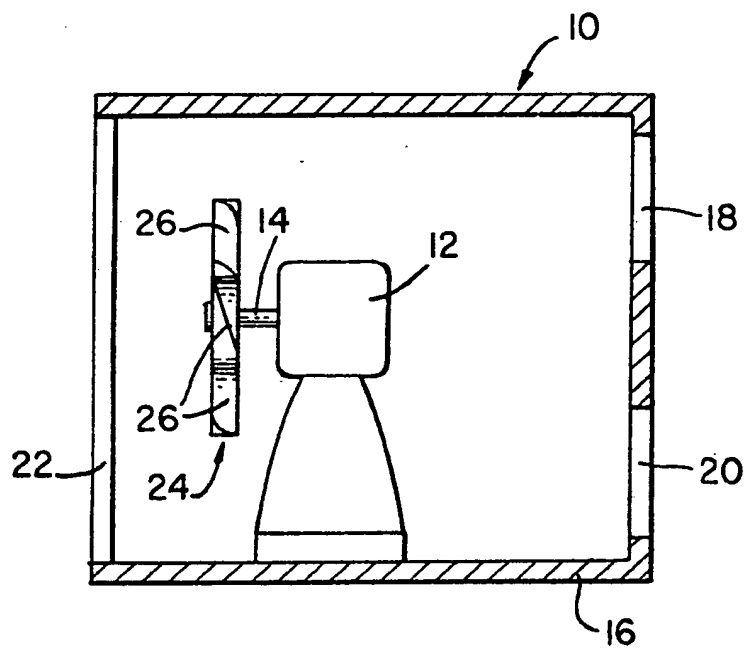
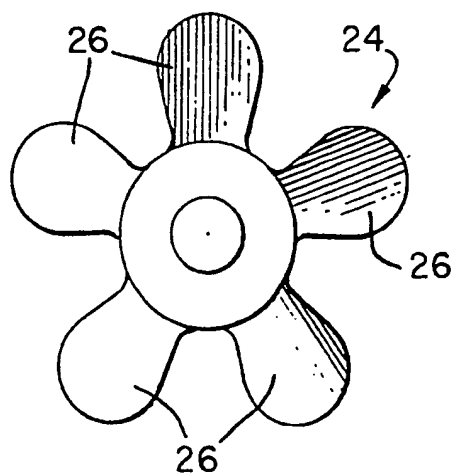


FIG. 2.



## SPECIFICATION

## Improved fan construction

## FIELD OF THE INVENTION

This invention relates to a perfume or odor emitting dry impellor or fan blade for use in an  
5 apparatus effecting circulation of air. More particularly, this invention relates to the provision of a 5  
perfume or odor emitting dry air impellor or fan blade or blades for use in an apparatus for dispersing  
and circulating a desired fragrance, such as a perfume, a deodorant, a disinfectant, a medication or the  
like, in the space in which the apparatus provided with such impellor or fan blade is placed.

## DESCRIPTION OF THE PRIOR ART

10 Prior art United States Patents disclosing apparatus for circulating perfumed or odor containing air 10  
have involved liquids and vapors and are of a different nature than the instant invention which has to do  
with dry impellers or fan blades. For example, see:

712,177 — BRADSHAW

725,086 — JACOBS

15 1,066,851 — SIEFERT 15

3,678,810 — CHANDLER

3,864,080 — VALBONA ET AL

Of the patents listed above, Chandler relates to an air freshener evaporator provided with rotatable  
disc members which are dipped into air-freshening liquid for purposes of providing an air-freshening  
20 effect. 20

The Bradshaw, Jacobs and Siefert patents relate to odor distributing fans comprising absorbent  
wicks or tabs which are structurally connected to rotate with the fan blades in carrying vapor producing  
substances to the blowing path of the fan blades.

The Valbona et al Patent relates to an apparatus including a disc of porous expanded plastic  
25 material receiving a fragrant liquid from a member pressed thereagainst, after which, when the disc is 25  
rotated, air will be thrown radially outwardly across a face of the disc to thereby entrain any moisture or  
vapor from the fragrant substance and disperse such vapor.

The prior patents listed below have to do with propeller or impellor structure and are unrelated to  
the instant invention:

30 1,223,321 — CURTISS 30

2,230,273 — SMITH

3,846,045 — MINCUZZI

Curtiss relates to a propeller having a hub portion impregnated with an extraneous substance,  
such as a resin, for purposes of toughening the blade in that area.

35 Smith is of general interest in that it relates to a metal propeller blade coated with a brass or 35  
bronze containing graphite or like substance for purposes of protecting the blade from corrosion.

Mincuzzi is of general interest in that it discloses a pump comprising an impellor made of plastic  
material.

The patents listed below have to do with static plastic or like materials which incorporate perfume  
40 or odor emitting substances but they do not disclose the concept of forming such materials into shapes 40  
capable of circulating air when driven or rotated by the shaft of a motor. These prior art patents listed  
below do not disclose the novel teachings of the instant invention involving the provision of a dry  
impellor or fan blade for the circulation of air.

2,930,768 — HOPKINS

3,016,199 — KEYDEL

45 3,567,119 — WILBERT ET AL 45

3,886,125 — CHROMECEK

3,954,963 — KUDERNA, JR.

3,954,964 — KUDERNA, JR.

3,966,902 — CHROMECEK

3,969,280 — SAYCE ET AL

4,009,684 — KLIMENT ET AL

4,020,156 — MURRAY ET AL

4,067,824 — TENG ET AL

4,110,261 — NEWLAND

4,177,110 — HAUTMANN

4,125,278 — SULLIVAN ET AL

4,128,507 — MITZNER

4,156,067 — GOULD

4,209,417 — WHYTE

5 Examples of plastic compositions which are odor emitting include Chronceek 3,966,902, Example 23, wherein it is suggested that a fragrance be incorporated in a plastic polymer and Kliment et al No. 4,009,684, column 3, lines 33—35 wherein it is suggested that a fragrance be incorporated in a monomer which is then polymerized.

10 While the patents listed above constitute the most relevant known prior art, they do not teach or suggest the inventive concept specifically disclosed and claimed herein. 10

#### SUMMARY OF THE INVENTION

This invention provides a new and improved dry apparatus for dispersing and circulating fragrance permeated air in a particular space in order to obtain a desired and/or pleasant atmosphere and without utilizing liquids or vapors or saturated wicks which may be objectionable or undesirable.

15 It is an object of this invention to provide a new and improved dry impellor or fan blade for dispersing and circulating a pleasant or otherwise desired fragrance. 15

A further object of this invention is to provide a new and improved dry impellor or fan blade for effecting a desired fragrant atmosphere wherein the source of fragrance is the impellor or fan blade itself.

#### 20 BRIEF DESCRIPTION OF THE DRAWING 20

Additional features and advantages of the disclosed invention will be readily discernible with due consideration of the appended claim, specification, and drawing in which:

FIG. 1 shows a side view of an apparatus including an impellor or fan blade according to inventive concept disclosed herein.

25 FIG. 2 is a plan view of the impellor or fan blade. 25

#### DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to the drawing, Fig. 1, there is disclosed a motor driven fan 10 including an electric motor 12 which may be battery operated, which motor 12 is provided with a shaft 14 on which is mounted the dry and perfume emitting impellor or fan 24 within the housing 16. Housing 16 is provided with air inlets 18, 20 and air outlet 22. The impellor 24 is removably secured for rotation with shaft 14. Impellor 24 is provided with a plurality of individual blades 26 as is well known. Blades 26 are molded from an odor emitting material, such as polymeric plastic in which has been incorporated an odor emitting substance such as perfume, a disinfectant, a deodorant, a medication, or other desired aromatic material. The method of incorporating such substances in static polymeric plastics is well known as indicated above. 35

As motor 12 drives shaft 14, which in turn rotates blades 26 of impellor 24, air is drawn in through inlets 18, 20, past blades 26, and out through outlet 22 and dispersed and circulated in the ambient atmosphere. Also, as air is drawn past blades 26, perfume or odor emitted by the blades 26 is entrained in the air currents with such perfume or odor being carried through outlet 22, and ultimately dispersed and circulated in the space surrounding the apparatus 10, particularly if the space is enclosed. 40

The air impellor 24 including individual blades 26 are specifically and critically made of a relatively dry material such as a plastic polymer or copolymer in which there has been incorporated a perfume or odor emitting substance. The air impellor 24 including blades 26 is so formed, that, when rotated, they cause forced air movement. A person or persons in the vicinity of the apparatus, as described, receive the sensation of the perfume or odor emitted by the impellor or fan blade or blades. In accordance with the invention the use of liquids, vapors, or wicks is eliminated. When, after a period of time, it becomes apparent that the perfume or odor is becoming weak in effect, fresh impellers or fan blades can simply replace the used ones. 45

It will be obvious to those skilled in the art that various changes may be made without departing from the scope of the invention and therefore the invention is not limited to what is shown in the drawing and described in the specification but only as indicated in the appended claims. 50

#### CLAIMS

1. A perfume or odor emitting air circulating dry impellor or fan blade formed in shape to force air circulation when rotated, said impellor or fan blade comprising a material incorporating an odor emitting substance. 55

2. The structure of Claim 1 wherein said material is a molded polymeric plastic.
3. The structure of Claim 1 or 2 wherein said impellor or fan blade is removably mounted on a rotatable shaft.

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